

MEMO

DATE: June 13, 2005

TO: Energy and Environment Committee

FROM: Alan Thompson, Senior Regional Planner, (213) 236-1940 thompson@scag.ca.gov

SUBJECT: SCE "Demand Response" Initiative

SUMMARY:

Mr. Mark Martinez, Southern California Edison (SCE) will describe SCE's Demand Response Initiative for critical times when statewide energy supplies are low. While SCE does not predict any energy shortages this summer, energy reserves will be low enough to cause supply concerns if summer temperatures are higher than normal. For this reason, they have developed several programs, one of which is the Demand Response Initiative.

BACKGROUND:

SCE offers a variety of Demand Response Programs to help qualifying customers reduce their energy usage during peak times while lowering their electricity costs. Qualifying customers who can reduce power when statewide energy supplies are low may earn financial incentives, and/or other benefits, by participating in these programs. These programs include:

- Summer Discount Plan
- CPA Demand Reserves Partnership
- I-6 Large Power Interruptible Program
- Scheduled Load Reduction Program
- GoodWatts Program.
- Base Interruptible Program
- Critical Peak Pricing
- Energy Smart Thermostat Program
- Agricultural and Pumping Interruptible Service Program
- Optional Binding Mandatory Curtailment Program

Each of the Demand Response Programs are described in greater detail in the attached matrix from SCE's website (<http://www.sce.com/RebatesandSavings/LargeBusiness/DemandResponse/>).

DEMAND RESPONSE PROGRAMS

PROGRAM	IF A CUSTOMER WANTS...							Residential	Eligibility			Agricultural and Pumping	Direct Access Service	Bundled Service*
	Guaranteed Payment	Pay for Performance	Limited Number of Events	No Minimum Load Reduction	No Interval Metering Required	Advance Notice	Penalty		<200 kW	>200 kW	>500 kW			
Agricultural and Pumping Interruptible (AP-I)	•		•				Yes					•	•	•
Summer Discount Plan – Base (SDP)	•		•	•	•		No	•	•	•	•		•	•
Summer Discount Plan – Enhanced (SDP)	•			•	•		No	•	•	•	•		•	•
Time-of-Use Base Interruptible Program (TOU-BIP)	•		•				Yes			•	•		•	•
California Demand Reserves Partnership (Cal-DRP)	•	•	•	•			Yes		•	•	•	•	•	•
Critical Peak Pricing–Volumetric Charge Discount (CPP-VCD)			•	•		•				•	•	•		•
Critical Peak Pricing–Generation Capacity Charge Discount (CPP-GCDD)			•	•		•					•			•
Demand Bidding Program (DBP)		•				•	No			•	•	•	•	•
Large Power Interruptible (L-6)	•		•			•	Yes				•		•	•
Optional Binding Mandatory Curtailment (OBMC)						•	Yes	•	•	•	•		•	•
20/20 Summer Savings Program (w/Automatic Enrollment)		•			•		No	•	•					•
PILOT PROGRAMS														
Electricity Pricing Research Project – Critical Peak Pricing – Fixed or Variable (CPP)			•	•				•	•					•
Electricity Pricing Research Project – Time-of-Use (TOU)				•				•	•					•
SCE Energy\$mart Thermostat SM (E\$T)		•		•	•		Yes		•	•			•	•

* Bundled Service customers are those who rely on SCE for generation, transmission, and distribution services.



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Program	Incentives/Penalties			Sign-Up Period	Other Program Features	
	Incentive Amount	Triggers	Penalty Amount		Special Conditions	Participation in Demand Response Programs Allowed
Agricultural and Pumping Interruptible (AP-I) The Agricultural and Pumping Interruptible Program (AP-I) offers qualifying customers a credit/reduced rates for allowing SCE to temporarily shut off pumping equipment without advance notice for a limited number of times throughout the year.	AP-I <ul style="list-style-type: none"> per kWh credit, year-round 	<ul style="list-style-type: none"> CAISO Stage II System Emergency 	For each failure to interrupt, penalties (excess energy charges) are: \$10.06 per kWh for service voltage in excess of 50 kV \$10.42 per kWh for service voltage 2 kV to 50 kV \$10.65 per kWh for service voltage below 2 kV	Anytime; best before summer season	<ul style="list-style-type: none"> Interruption events will not exceed 25 events per calendar year, 6 hours per event, or 150 hours per calendar year Annual Opt-Out November 1– December 1 Fee for interruption notification system equipment and installation 	<ul style="list-style-type: none"> This rate schedule is not applicable to PA-1 customers who receive the off-peak credit, or those served under an experimental rate schedule
Summer Discount Plan – Base (SDP) The Summer Discount Plan – Base (SDP) offers qualifying customers a credit on their bill, during the summer season, for allowing SCE to periodically turn off their air conditioner without advanced notice up to 15 times. Customers allow SCE access to their property to install a remote controlled device on their air conditioner unit. Qualifying customers participating in the SDP and SCE's Net Energy Metering (NEM) Program who generate more energy than they consume will not receive any SDP credits.	\$/Ton/Day Residential 100% = \$0.180 67% = \$0.100 50% = \$0.05 GS-1/TOU-GS-1 30% = \$0.014 40% = \$0.042 50% = \$0.070 100% = \$0.200 \$/Ton/Mo. GS-2, TOU-GS-2, or TOU-8 30% = \$0.42 40% = \$1.25 50% = \$2.10 100% = \$6.00	<ul style="list-style-type: none"> CAISO Stage II Storm Alert SCE Test 	None	Anytime; best before summer season	<ul style="list-style-type: none"> Cycling periods are limited to 6 hours per event, 15 events per summer season. Multiple events in one day are possible If customer participates in multiple programs, customer cannot receive payment for same reduced load The SDP requires a minimum of ONE-YEAR participation from the date service on the plan begins This program is not recommended for anyone unable to tolerate high temperatures or having significant health problems 	This rate is not applicable to the following customers: <ul style="list-style-type: none"> DM DMS-1, 2, 3 TOU-D-1 TOU-D-2 Medical Baseline with air conditioning

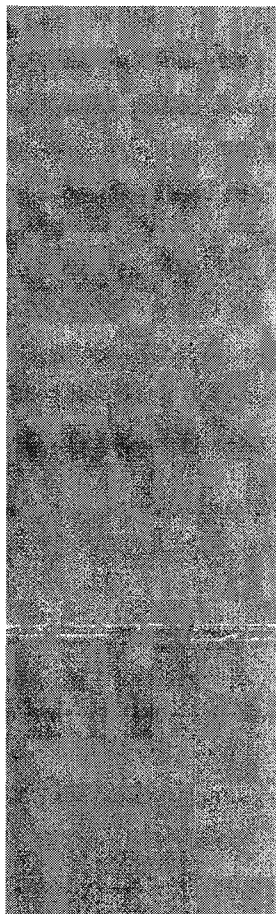
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Summer Discount Plan – Enhanced (SDP) The Summer Discount Plan – Enhanced (SDP) offers qualifying customers a credit on their bill, during the summer season, for allowing SCE to periodically turn off their air conditioner without advanced notice during the summer season. When compared with the Base Summer Discount Plan, the Enhanced plan doubles credit amounts, but the potential number of times SCE may shut off the customer's air conditioning unit is unlimited during the summer season. Customers allow SCE access to their property to install a remote controlled device onto their air conditioner unit. Qualifying customers participating in the SDP and SCE's Net Energy Metering (NEM) Program who generate more energy than they consume will not receive any SDP credits.	<u>\$/Ton/Day</u> Residential 100% = \$0.360 67% = \$0.200 50% = \$0.10 <u>\$/Ton/Mo.</u> GS-1/TOU-GS-1 30% = \$0.028 40% = \$0.084 50% = \$0.140 100% = \$0.400 GS-2, TOU-GS-2, or TOU-B 30% = \$0.84 40% = \$2.50 50% = \$4.20 100% = \$12.00	<ul style="list-style-type: none"> CAISO Stage II Storm Alert SCE Test 	None	Anytime; best before summer season	<ul style="list-style-type: none"> Double incentive over Base plan Cycling periods are limited to 6 hours duration per day, unlimited events during summer season. Multiple occurrences in one day are Not possible If customer participates in multiple programs, customer cannot receive payment for same reduced load The SDP requires a minimum of ONE-YEAR participation from the date your service on the plan begins This plan is not recommended for anyone unable to tolerate high temperatures or having significant health problems 	This rate is not applicable to the following customers: <ul style="list-style-type: none"> DM DMS-1, 2, 3 TOU-D-1 TOU-D-2 Medical Baseline with air conditioning
Time-of-Use Base Interruptible Program (TOU-BIP) The Base Interruptible Program (TOU-BIP) is an interruptible program designed for customers with electrical demands of 200 kW and above, who can reduce their electrical usage by a minimum of 15% of their load, but not less than 100 kW for each event. In exchange, the customer will receive a monthly bill credit based on the difference between their monthly average peak period power use and the customer's designated Firm Service Level (FSL). Penalties apply for failure to reduce power to at least the contracted FSL during an event.	Per eligible kW per calendar month (monthly average peak kW minus FSL): Below 2 kV = \$7.10 2 kV-50 kV = \$6.95 Above 50 kV = \$6.70	<ul style="list-style-type: none"> Receipt of notification from CAISO 	\$10.65 per kWh (below 2 kV) \$10.42 per kWh (2 kV to 50 kV) \$10.06 per kWh (Above 50 kV)	Anytime; best before summer season	<ul style="list-style-type: none"> Open to Eligible Customers ≥200 kW Customers must commit at least 15% reduction, with minimum 100 kW per event Annual Opt-Out/FSL Decrease or Increase November 1 – December 1 "No Insurance" Declaration Required "Essential Use Customer" Declaration Required Must set FSL to no less than 50% of average peak demand Interruption events limited to one per day at four hours each, 10 events per calendar month, and 120 hours per calendar year Non-compliance Termination Failure to comply with two official notifications of interruption could result in participant's termination from the program 	<ul style="list-style-type: none"> May not participate in CAISO's Ancillary Services Load Program With limitations, may participate in DBP, Cal-DRP, I-6, or OBMC; cannot be paid for same reduced load

Program	Incentives/Penalties			Sign-Up Period	Other Program Features	
	Incentive Amount	Triggers	Penalty Amount		Special Conditions	Participation in Demand Response Programs Allowed
California Demand Reserves Partnership (Cal-DRP) The California Demand Reserves Partnership (Cal-DRP) is a statewide year-round program available to Bundled Service and Direct Access business and agricultural customers who can provide demand reductions in exchange for a capacity payment. These power reductions are applied in wholesale markets as a Call Option. Aggregators promote the partnership and sign up customers throughout the state. The program administrator pays these aggregators, who in turn pay customers for their participation.	Contact program aggregator	<ul style="list-style-type: none"> Price System conditions 	Contact program aggregator	Contact program aggregator	<ul style="list-style-type: none"> Participants determine the maximum amount of kWh reduction they can provide during weekdays between 11:00 a.m. and 7:00 p.m. Then they submit a capacity bid at the beginning of the month and receive a capacity payment Participants commit to reduce their demand up to a maximum of 24 hours per calendar month or a total of 150 hours per calendar year. Once a participant meets the monthly obligation of 24 hours, it is not obligated to reduce demand for any hours remaining in that month 	<ul style="list-style-type: none"> AP-I CPP I-6 OBMC TOU-BIP
Critical Peak Pricing-Volumetric Charge Discount (CPP-VCD) The Critical Peak Pricing-Volumetric Charge Discount (CPP-VCD) Program may benefit Bundled Service customers with demands greater than 200 kilowatts who can reduce or shift summertime critical on-peak power usage. Customers have the option of reducing power usage during CPP events or paying a higher-than-normal on-peak price. In return, customers receive a reduced on-peak and mid-peak rate year-round for all non-CPP usage.	Reduced year-round on-peak and mid-peak rates during non-CPP periods 100% bill protection for new enrollees	<ul style="list-style-type: none"> System conditions Price Temperature Program Testing 	No penalty, but customers pay approximately three to five times their normal rate schedule for on-peak CPP usage	Year-round	<ul style="list-style-type: none"> Bundled Service customers must have at least one account with a demand greater than 200 kW on a CPP schedule Critical peak days may be called Monday through Friday (no holidays) from noon to 6:00 p.m. during the summer season only (first Sunday in June through first Sunday in October) New CPP customers electing to participate in the Bill Protection Incentive must remain on the CPP program for a minimum of 12 consecutive months to be eligible for the incentive CPP customers automatically grant site visits by and surveys from the CEC to assess program effectiveness 	<ul style="list-style-type: none"> DBP Cal-DRP

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	Incentive Amount	Triggers	Penalty Amount		Special Conditions	Participation in Demand Response Programs Allowed
Critical Peak Pricing-Generation Capacity Charge Discount (CPP-GCCD) The Critical Peak Pricing-Generation Capacity Charge Discount (CPP-GCCD) Program may benefit Bundled Service customers with demands greater than 500 kW who can reduce or shift load out of the summertime critical on-peak period. Customers have the option of reducing power usage during CPP events or paying a higher-than-normal on-peak price. In return, customers receive a reduced on-peak and mid-peak rate year-round for all non-CPP usage.	Reduced year-round on-peak and mid-peak rates during non CPP periods Bill Protection for new enrollees	<ul style="list-style-type: none"> • System conditions • Price • Temperature • Program Testing 	No penalty, but customers pay a higher amount (to be determined) than their normal rate schedule for on-peak CPP usage	Year-round	<ul style="list-style-type: none"> • Bundled Service customers must have at least one account with a demand greater than 500 kW on a CPP schedule • Critical peak days may be called Monday through Friday (no holidays) from noon to 6:00 p.m. during the summer season only (first Sunday in June through first Sunday in October) • New CPP customers electing to participate in the Bill Protection Incentive must remain on the CPP program for a minimum of 12 consecutive months to be eligible for the incentive • CPP-GCCD customers automatically grant CEC site visits and surveys to assess program effectiveness 	<ul style="list-style-type: none"> • DBP • Cal-DRP
Demand Bidding Program (DBP) The Demand Bidding Program (DBP) is a flexible Internet-based bidding program that offers qualified customers the opportunity to receive a credit on their bill for voluntarily reducing power (when a DBP event is called on a day-ahead basis) without incurring any financial penalty. The DBP is available to both SCE Bundled Service and Direct Access customers who have at least one service account with demands greater than 200 kW.	Forecasted hourly market price plus \$0.10 per kWh Credits capped at \$0.35 per kWh, unless the price of power exceeds \$0.35, after which participants will receive market price *See tariff for incentive amount variations for Direct Access customers	<ul style="list-style-type: none"> • Program Testing • Day-ahead forecast of 43,000 MW • CAISO issues alert one day ahead by 3:00 p.m. 	None	Year-round	<ul style="list-style-type: none"> • Minimum bid for an individual service account is 50 kW per hour. Customers may combine (aggregate) up to 25 service accounts and bid a combined minimum of 200 kW per hour, provided that the main service account (Designated Lead Account) has a demand greater than 200 kW • Participants must meet at least the minimum load reduction requirement and reduce their load between 50% and 150% of their committed power reduction, but not less than 50 kW for individual participants and 200 kW for aggregated group participation • Communicating interval meters and Internet access are required 	<ul style="list-style-type: none"> • Interruptible programs (i.e., I-6 or TOU-BIP, but cannot be paid for the same reduced load) • CPP • SDP

Program	Incentives/Penalties			Sign-Up Period	Other Program Features	
	Incentive Amount	Triggers	Penalty Amount		Special Conditions	Participation in Demand Response Programs Allowed
Large Power Interruptible (I-6, RTP-2-I) This program is closed, unless the customer is new to the service territory or is an existing customer adding new load. The Large Power Interruptible Program offers reduced rates to program participants in exchange for contracted amounts of power reductions during an event. Penalties apply for failure to reduce power to at least the FSL during an event.	Reduced kWh and kW rates year-round	<ul style="list-style-type: none"> Receipt of notification from CAISO 	Secondary (<2 kV) \$10.65 per kWh Primary (2-50 kV) \$10.42 per kWh Subtransmission (>50 kV) \$10.06 per kWh	Closed as of November 26, 1996 (except to customers new to SCE territory, or to existing customers adding new load)	<ul style="list-style-type: none"> Annual Opt-Out/FSL Decrease or Increase November 1 – December 1 "No Insurance" Declaration Required "Essential Use Customer" Declaration Required Must set FSL to no less than 50% of average peak demand Interruption events are limited to one event per day, four events per calendar week (defined as Sunday through Saturday), or 25 events per calendar year and will not exceed 6 hours per day, 40 hours per calendar month, or 150 hours per calendar year 	<ul style="list-style-type: none"> May not participate in any similar CAISO or SCE program (such as CAISO's Demand Response Program, Base Interruptible Program, etc.) until customer meets annual I-6 obligation May not participate in CAISO's Ancillary Services Load Program May participate in TOU-BIP, DBP, OBMC; cannot be paid for same reduced load
Optional Binding Mandatory Curtailment Program (OBMC) The Optional Binding Mandatory Curtailment Program (OBMC) exempts customers from rotating outages in exchange for partial power reduction of their entire circuit during every rotating outage. Customers will be required to file an OBMC Plan acceptable to SCE prior to participation in this program. Additionally, to participate a minimum of 15% of the entire circuit load must be available for reduction during every rotating outage.	Exempted from rotating outages	<ul style="list-style-type: none"> Stage III – Rotating outages 	\$6.00 per kWh on excess energy	Anytime	<ul style="list-style-type: none"> Must have ability to reduce up to 15% in circuit load, in increments of 5%, during every rotating outage Failure to comply on two OBMC events in a year shall result in termination on the program, and the customer shall be prohibited from participation in OBMC programs for five years Available to any size customer; however, the entire circuit must reduce load 	<ul style="list-style-type: none"> No participation in CAISO's DRP or in a utility program that aggregates power for the CAISO's DRP May participate in TOU-BIP or I-6, and must reduce power below the lower of FSL or the 10-day baseline unless the monthly obligation is completed, and in that case, the 10-day baseline will be used May participate in DBP, but shall not be paid for any power reductions occurring during an OBMC event
20/20 Summer Savings Program The 20/20 Summer Savings Program offers eligible customers a 20% bill credit at the end of the summer for reducing usage by 20% on average over the four summer months. Qualifying bundled service customers include those with demands of less than 200 kW.	20% credit on total summer energy charges before taxes	N/A	None	Automatic enrollment	<ul style="list-style-type: none"> Summer season is Sunday, June 5, 2005 to Sunday, October 2, 2005 Minimum load reduction 	<ul style="list-style-type: none"> No

Program	Incentives/Penalties			Sign-Up Period	Other Program Features	
	Incentive Amount	Triggers	Penalty Amount		Special Conditions	Participation in Demand Response Programs Allowed
Electricity Pricing Research Project – Critical Peak Pricing – Fixed or Variable (SPP-CPP-V or SPP-CPP-F) Research project testing whether residential and small business customers will use electricity differently throughout the year when rates are higher during a CPP event.	Participation Appreciation Payments available	<ul style="list-style-type: none"> • CAISO emergencies • Temperature • Price • Program Testing 	No penalty, but customer pays a higher rate for energy during Super Peak events.	Customers are selected by SCE and participation is voluntary	<ul style="list-style-type: none"> • Interval meters are required and provided by SCE • CPP-V events may occur from noon to 6:00 p.m. weekdays (no holidays), 90 hours in a calendar year and a maximum of 6 hours per event <ul style="list-style-type: none"> – Summer season is 1st Sunday in June to 1st Sunday in October • CPP-F events may occur from 2 p.m. to 7 p.m. weekdays, except holidays a maximum of 15 events per year <ul style="list-style-type: none"> – Summer season is May 1st to October 31st 	None
Electricity Pricing Research Project – Time-of-Use (SPP-TOU) Research project testing whether residential and small business customers will use electricity differently when rates are higher at certain times during the day.	Participation Appreciation Payments available	N/A	N/A	Customers are randomly selected by SCE and participation is voluntary	<ul style="list-style-type: none"> • Small Business on-peak period is 12:00 p.m. - 6:00 p.m. weekdays (no holidays) <ul style="list-style-type: none"> – Summer season is 1st Sunday in June to 1st Sunday in October • Residential on-peak period is 2:00 p.m. - 7:00 p.m. <ul style="list-style-type: none"> – Summer season is May 1st through October 31st 	None
EnergySmart ThermostatSM Program (Pilot Program) Pilot program designed to equip small commercial buildings with the capacity to automatically control thermostats. Program offers a one-time payment to each customer at end of one full year of participation.	up to \$300.00	<ul style="list-style-type: none"> • ISO Stage II • SCE Test 	Forfeit \$5 to \$10 per override	Closed to new participants	<ul style="list-style-type: none"> • Bundled service customers with at least 1,000 kWh who do not exceed an average monthly billing demand of 200 kW 	



*This fact sheet is meant
to be an aid to
understanding SCE's
pricing schedules. It
does not replace the
tariffs. Please refer to
the individual rate
schedule of interest for
a complete listing of
terms and conditions
of service, which can
be viewed online at
www.sce.com.*



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